search results
SN 09/720066
PN 13

L Number	Hits	Search Text	DB	Time stamp
6	0	AAV same (Srivastava.au.)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/11 15:47
7	0	Srivastava.au.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/11 15:47
8	3533	aav	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/11 15:47
9	5	"9809524"	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/11 15:47
-	0	09/720066	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/11 13:51
-	0	"199967393"	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/09 13:12
-	1	"99/67393"	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/09 13:13
-	0	PCT/EP99/04288	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/09 13:13
-	721	AAV and infectivity	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/10 14:01
-	155	AAV same infectivity	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/10 14:01
-	123	AAV same (structural adj protein or VP1 or VP2 or VP3) and infectivity	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/10 14:02
-	8	AAV same (structural adj protein or VP1 or VP2 or VP3) same infectivity	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/10 14:04
-	64	AAV same (structural adj protein or VP1 or VP2 or VP3) and (increased or increase or efficient or improved) same infectivity	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/10 14:04

-	8	AAV same (structural adj protein or VP1 or VP2 or VP3) and (increased or increase or efficient or improved) adj15 infectivity	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/11 15:46
-	113	AAV same (structural adj protein or VP1 or VP2 or VP3) and (increased or increase or efficient or improved) adj15 (infection or infectivity)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/10 14:31
-	0	AAV same (structural adj protein or VP1 or VP2 or VP3) same (increased or increase or efficient or improved) adj15 infectivity	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/10 14:33
-	3	AAV same (increased or increase or efficient or improved) adj15 infectivity and (mutation or insertion or deletion) same (structural adj protein or VP1 or VP2 or VP3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/10 14:34
-	95	monoclonal adj3 antibody adj3 CD34	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/11 13:51
-	0	monoclonal adj3 antibody adj3 CD34 same sFv	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/11 13:52
-	2	monoclonal adj3 antibody adj3 CD34 same sequence	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/11 13:52
-	0	sFv adj3 CD34	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/11 13:52
-	0	sFv same CD34	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/11 13:52
-	4	single adj chain adj antibody adj3 CD34	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/11 13:55
-	0	YKQIS	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/11 13:56
-	0	SQSGA	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/11 13:56
-	0	YLTLN	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/11 13:56
-	0	NGSQA	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/09/11 13:56

=> file medline caplus
COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION
FULL ESTIMATED COST | 0.21 | 0.21

FILE 'MEDLINE' ENTERED AT 14:45:10 ON 10 SEP 2003

FILE 'CAPLUS' ENTERED AT 14:45:10 ON 10 SEP 2003
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=> s AAV (S) (structural (A) protein or VP1 or VP2 or VP3) and (increased or increase or efficient or improved) (5A) (infectivity or infection)
L1 1 AAV (S) (STRUCTURAL (A) PROTEIN OR VP1 OR VP2 OR VP3) AND (INCREASED OR INCREASE OR EFFICIENT OR IMPROVED) (5A) (INFECTIVITY OR INFECTION)

=> d ibib abs

L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:576422 CAPLUS
DOCUMENT NUMBER: 129:288869
TITLE: Development of novel cell surface CD34-targeted recombinant adenoassociated virus vectors for gene therapy
AUTHOR(S): Yang, Qicheng; Mamounas, Michael; Yu, Gang; Kennedy, Scott; Leaker, Brian; Merson, James; Wong-Staal, Flossie; Yu, Mang; Barber, Jack R.
CORPORATE SOURCE: Immusol, Inc., San Diego, CA, 92121, USA
SOURCE: Human Gene Therapy (1998), 9(13), 1929-1937
CODEN: HGTHE3; ISSN: 1043-0342
PUBLISHER: Mary Ann Liebert, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Recombinant adeno-assocd. virus (rAAV) type 2 vectors have been used to transduce a wide variety of cell types, including hematopoietic progenitor cells. For in vivo gene transfer, it is desirable to have an rAAV vector that specifically transduces selected target cells. As a first step toward generating an rAAV vector capable of targeting delivery in vivo, the authors engineered a chimeric protein combining the AAV capsid protein and the variable region of a single-chain antibody against human CD34 mols., a cell surface marker for hematopoietic stem/progenitor cells. Inclusion of the chimeric CD34 single-chain antibody-AAV capsid proteins within an rAAV virion significantly **increased** the preferential **infectivity** of rAAV for the CD34+ human myoleukemia cell line KG-1, which is normally refractory to rAAV transduction. Antibodies against the single-chain antibody and the CD34 protein blocked this transduction. This chimeric vector represents a significant improvement in the host range of rAAV and the first step toward specific gene delivery by rAAV vectors to cells of choice, in this case, hematopoietic progenitor cells, for the treatment of human disease. The authors constructed rAAV type 2 vectors encoding modified capsid proteins that allow for cell-type specific targeting to cells that express the CD34 protein. A fusion protein was constructed, consisting of the N terminus of the **AAV**

virion protein, VP2, and a single-chain antibody directed against CD34. Vector particles packaged in the presence of the VP2-antibody fusion protein are bound specifically to CD34-expressing KG-1 cells. Moreover, while KG-1 cells were resistant to transduction by unmodified rAAV vectors, the modified vector particles were able to transduce these cells. Antibodies against either the CD34 mol. or the single-chain antibody blocked the modified rAAV virion transduction of KG-1 cells. Thus, the tropism of the rAAV particle can be altered by addn. of chimeric capsid fusion proteins during viral particle formation.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> FIL STNGUIDE

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	25.43	25.64

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CA SUBSCRIBER PRICE	-0.65	-0.65

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LAST RELOADED: Sep 5, 2003 (20030905/UP).

=> file medline caplus

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FULL ESTIMATED COST	0.12	25.76

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CA SUBSCRIBER PRICE	0.00	-0.65

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=> s AAV and structural (A) protein or VP1 or VP2 or VP3) same (increased or increase or efficient or improved) (5A) (infectivity or infection)
UNMATCHED RIGHT PARENTHESIS 'VP3) SAME'
The number of right parentheses in a query must be equal to the number of left parentheses.

=> s AAV and (structural (A) protein or VP1 or VP2 or VP3) same (increased or increase or efficient or improved) (5A) (infectivity or infection)
MISSING OPERATOR VP3) SAME
The search profile that was entered contains terms or

nested terms that are not separated by a logical operator.

=> s AAV and structural (A) protein or VP1 or VP2 or VP3) (S) (increased or increase or efficient or improved) (5A) (infectivity or infection)
UNMATCHED RIGHT PARENTHESIS 'VP3) '
The number of right parentheses in a query must be equal to the number of left parentheses.

=> s AAV and (structural (A) protein or VP1 or VP2 or VP3) (s) (increased or increase or efficient or improved) (5A) (infectivity or infection)
L2 0 AAV AND (STRUCTURAL (A) PROTEIN OR VP1 OR VP2 OR VP3) (S) (INCRE ASED OR INCREASE OR EFFICIENT OR IMPROVED) (5A) (INFECTIVITY OR INFECTION)

=> s AAV and (structural (A) protein or VP1 or VP2 or VP3) and (increased or increase or efficient or improved) (5A) (infectivity or infection)
L3 1 AAV AND (STRUCTURAL (A) PROTEIN OR VP1 OR VP2 OR VP3) AND (INCRE ASED OR INCREASE OR EFFICIENT OR IMPROVED) (5A) (INFECTIVITY OR INFECTION)

=> d ibib abs

L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:576422 CAPLUS
DOCUMENT NUMBER: 129:288869
TITLE: Development of novel cell surface CD34-targeted recombinant adenoassociated virus vectors for gene therapy
AUTHOR(S): Yang, Qicheng; Mamounas, Michael; Yu, Gang; Kennedy, Scott; Leaker, Brian; Merson, James; Wong-Staal, Flossie; Yu, Mang; Barber, Jack R.
CORPORATE SOURCE: Immusol, Inc., San Diego, CA, 92121, USA
SOURCE: Human Gene Therapy (1998), 9(13), 1929-1937
CODEN: HGTHE3; ISSN: 1043-0342
PUBLISHER: Mary Ann Liebert, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Recombinant adeno-assocd. virus (rAAV) type 2 vectors have been used to transduce a wide variety of cell types, including hematopoietic progenitor cells. For in vivo gene transfer, it is desirable to have an rAAV vector that specifically transduces selected target cells. As a first step toward generating an rAAV vector capable of targeting delivery in vivo, the authors engineered a chimeric protein combining the **AAV** capsid protein and the variable region of a single-chain antibody against human CD34 mols., a cell surface marker for hematopoietic stem/progenitor cells. Inclusion of the chimeric CD34 single-chain antibody-**AAV** capsid proteins within an rAAV virion significantly **increased** the preferential **infectivity** of rAAV for the CD34+ human myoleukemia cell line KG-1, which is normally refractory to rAAV transduction. Antibodies against the single-chain antibody and the CD34 protein blocked this transduction. This chimeric vector represents a significant improvement in the host range of rAAV and the first step toward specific gene delivery by rAAV vectors to cells of choice, in this case, hematopoietic progenitor cells, for the treatment of human disease. The authors constructed rAAV type 2 vectors encoding modified capsid proteins that allow for cell-type specific targeting to cells that express

the CD34 protein. A fusion protein was constructed, consisting of the N terminus of the **AAV** virion protein, **VP2**, and a single-chain antibody directed against CD34. Vector particles packaged in the presence of the **VP2**-antibody fusion protein are bound specifically to CD34-expressing KG-1 cells. Moreover, while KG-1 cells were resistant to transduction by unmodified rAAV vectors, the modified vector particles were able to transduce these cells. Antibodies against either the CD34 mol. or the single-chain antibody blocked the modified rAAV virion transduction of KG-1 cells. Thus, the tropism of the rAAV particle can be altered by addn. of chimeric capsid fusion proteins during viral particle formation.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s AAV and (structural (A) protein or VP1 or VP2 or VP3) and (infectivity or infection)
L4 37 AAV AND (STRUCTURAL (A) PROTEIN OR VP1 OR VP2 OR VP3) AND (INFECTIVITY OR INFECTION)

=> s AAV (S) (structural (A) protein or VP1 or VP2 or VP3) and (infectivity or infection)
L5 22 AAV (S) (STRUCTURAL (A) PROTEIN OR VP1 OR VP2 OR VP3) AND (INFECTIVITY OR INFECTION)

=> s AAV (S) (structural (A) protein or VP1 or VP2 or VP3) (S) (infectivity or infection)
L6 4 AAV (S) (STRUCTURAL (A) PROTEIN OR VP1 OR VP2 OR VP3) (S) (INFECTIVITY OR INFECTION)

=> dup rem l6
PROCESSING COMPLETED FOR L6
L7 3 DUP REM L6 (1 DUPLICATE REMOVED)

=> d ibib abs 1-3

L7 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:678569 CAPLUS
DOCUMENT NUMBER: 133:333831
TITLE: Monoclonal antibodies against the adeno-associated virus type 2 (AAV-2) capsid: epitope mapping and identification of capsid domains involved in AAV-2-cell interaction and neutralization of AAV-2 infection
AUTHOR(S): Wobus, Christiane E.; Hugle-Dorr, Barbara; Girod, Anne; Petersen, Gabriele; Hallek, Michael; Kleinschmidt, Jurgen A.
CORPORATE SOURCE: Forschungsschwerpunkt Angewandte Tumorvirologie, Deutsches Krebsforschungszentrum, Heidelberg, D-69120, Germany
SOURCE: Journal of Virology (2000), 74(19), 9281-9293
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The previously characterized monoclonal antibodies (MAbs) A1, A69, B1, and

A20 are directed against assembled or nonassembled adeno-assocd. virus type 2 (AAV-2) capsid proteins. Here we describe the linear epitopes of A1, A69, and B1 which reside in VP1, VP2, and VP3, resp., using gene fragment phage display library, peptide scan, and peptide competition expts. In addn., MAbs A20, C24-B, C37-B, and D3 directed against conformational epitopes on AAV-2 capsids were characterized. Epitope sequences on the capsid surface were identified by enzyme-linked immunoabsorbent assay using AAV-2 mutants and AAV serotypes, peptide scan, and peptide competition expts. A20 neutralizes infection following receptor attachment by binding an epitope formed during AAV-2 capsid assembly. The newly isolated antibodies C24-B and C37-B inhibit AAV-2 binding to cells, probably by recognizing a loop region involved in binding of AAV-2 to the cellular receptor. In contrast, binding of D3 to a loop near the predicted threefold spike does not neutralize AAV-2 infection. The identified antigenic regions on the AAV-2 capsid surface are discussed with respect to their possible roles in different steps of the viral life cycle.

REFERENCE COUNT: 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 3 MEDLINE on STN DUPLICATE 1

ACCESSION NUMBER: 93059635 MEDLINE
DOCUMENT NUMBER: 93059635 PubMed ID: 1331503
TITLE: Assembly of viruslike particles by recombinant structural proteins of adeno-associated virus type 2 in insect cells.
AUTHOR: Ruffing M; Zentgraf H; Kleinschmidt J A
CORPORATE SOURCE: Deutsches Krebsforschungszentrum, Forschungsschwerpunkt Angewandte Tumorvirologie, Heidelberg, Germany.
SOURCE: JOURNAL OF VIROLOGY, (1992 Dec) 66 (12) 6922-30. Journal code: 0113724. ISSN: 0022-538X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199212
ENTRY DATE: Entered STN: 19930122
Last Updated on STN: 19970203
Entered Medline: 19921215

AB The three capsid proteins VP1, VP2, and VP3 of the adeno-associated virus type 2 (AAV-2) are encoded by overlapping sequences of the same open reading frame. Separate expression of these proteins by recombinant baculoviruses in insect cells was achieved by mutation of the internal translation initiation codons. Coexpression of **VP1** and **VP2**, **VP2** and **VP3**, and all three capsid proteins and the expression of **VP2** alone in Sf9 cells resulted in the production of viruslike particles resembling empty capsids generated during **infection** of HeLa cells with **AAV**-2 and adenovirus. These results suggest a requirement for VP2 in the formation of empty capsids. Individual expression of the AAV capsid proteins in HeLa cells showed that VP1 and VP2 accumulate in the cell nucleus and VP3 is distributed between nucleus and cytoplasm. Coexpression of VP3 with the other structural proteins also led to nuclear localization of VP3, indicating that the formation of a complex with VP1 or VP2 is required for accumulation of VP3 in the nucleus.

L7 ANSWER 3 OF 3 MEDLINE on STN

ACCESSION NUMBER: 77229536 MEDLINE
DOCUMENT NUMBER: 77229536 PubMed ID: 881618
TITLE: Complementation of adeno-associated satellite virus (AAV) by temperature-sensitive mutants of adenovirus type 31.
AUTHOR: Mayor H D; Carrier S; Jordan L
SOURCE: JOURNAL OF GENERAL VIROLOGY, (1977 Jun) 35 (3) 545-53. Journal code: 0077340. ISSN: 0022-1317.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197709
ENTRY DATE: Entered STN: 19900314
Last Updated on STN: 19900314
Entered Medline: 19770917

AB Temperature-sensitive (ts) matants of human adenovirus type 31 were able to complement adeno-associated satellite virus (AAV) antigen production in both HEK and KB cells at both permissive and non-permissive temperatures. However, mutant ts 94, an adenovirus 31 mutant which produces apparently normal amounts of **structural protein** and DNA but is defective in maturation, was significantly inhibited in its ability to potentiate **AAV infectivity** at the non-permissive temperature. Normal AAV DNA and adenovirus DNA were isolated from co-infections with AAV and mutant ts 94 at the non-permissive temperature. We suggest that an adenovirus-coded maturation function common to both adenovirus and AAV maturation is defective in the ts 94 system.

=> s (mutant or mutated or mutate) (10A) (structural or VP1 or VP2 or VP3) (S) AAV
L8 5 (MUTANT OR MUTATED OR MUTATE) (10A) (STRUCTURAL OR VP1 OR VP2 OR VP3) (S) AAV

=> dup rem l8
PROCESSING COMPLETED FOR L8
L9 3 DUP REM L8 (2 DUPLICATES REMOVED)

=> d ibib abs 1-3

L9 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:869930 CAPLUS
DOCUMENT NUMBER: 138:150022
TITLE: Addition of six-His-tagged peptide to the C terminus of adeno-associated virus VP3 does not affect viral tropism or production
AUTHOR(S): Zhang, Huang-Ge; Xie, Jinfu; Dmitriev, Igor; Kashentseva, Elena; Curiel, David T.; Hsu, Hui-Chen; Mountz, John D.
CORPORATE SOURCE: Division of Clinical Immunology and Rheumatology, Department of Medicine, The University of Alabama at Birmingham, Birmingham, AL, 35294, USA
SOURCE: Journal of Virology (2002), 76(23), 12023-12031 CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Prodn. of large quantities of recombinant adeno-assocd. virus (AAV) is

difficult and not cost-effective. To overcome this problem, we have explored the feasibility of creating a recombinant AAV encoding a 6.times.His tag on the VP3 capsid protein. We generated a plasmid vector contg. a six-His (6.times.His)-tagged AAV VP3. A second plasmid vector was generated that contained the full-length AAV capsid capable of producing VP1 and VP2, but not VP3 due to a mutation at position 2809 that encodes the start codon for VP3. These plasmids, necessary for prodn. of **AAV**, were transfected into 293 cells to generate a 6.times.His-tagged **VP3 mutant** recombinant **AAV** . The 6.times.His-tagged VP3 did not affect the formation of AAV virus, and the phys. properties of the 6.times.His-modified AAV were equiv. to those of wild-type particles. The 6.times.His-tagged AAV did not affect the prodn. titer of recombinant AAV and could be used to purify the recombinant AAV using an Ni-nitrilotriacetic acid column. Addn. of the 6.times.His tag did not alter the viral tropism compared to wild-type AAV. These observations demonstrate the feasibility of producing high-titer AAV contg. a 6.times.His-tagged AAV VP3 capsid protein and to utilize the 6.times.His-tagged VP3 capsid to achieve high-affinity purifn. of this recombinant AAV.

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 3 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2000070317 MEDLINE
DOCUMENT NUMBER: 20070317 PubMed ID: 10600599
TITLE: Insertional mutagenesis of AAV2 capsid and the production of recombinant virus.
AUTHOR: Rabinowitz J E; Xiao W; Samulski R J
CORPORATE SOURCE: The Gene Therapy Center, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina 27599, USA.
CONTRACT NUMBER: DK53423-01 (NIDDK)
HL51818-06 (NHLBI)
SOURCE: VIROLOGY, (1999 Dec 20) 265 (2) 274-85.
Journal code: 0110674. ISSN: 0042-6822.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200002
ENTRY DATE: Entered STN: 20000209
Last Updated on STN: 20021218
Entered Medline: 20000202

AB The structural genes of adeno-associated virus serotype 2 (AAV2) have been altered by linker insertional mutagenesis in order to define critical components of virion assembly and infectivity. An in-frame restriction site linker was inserted across the capsid coding domain of a recombinant plasmid. After complementation in vivo, recombinant AAV2 viruses were generated and assayed for capsid production, packaging, transduction, heparin agarose binding, and morphology. Three classes of capsid mutants where identified. Class I mutants expressed structural proteins but were defective in virion assembly. Class II mutants generated intact virions that protected the viral genome from DNase, but failed to infect target cells. The majority of these mutants bound the heparin affinity matrix, suggesting that attachment to the AAV primary receptor was not rate limiting. One class II **mutant**, H2634, assembled virions and bound heparin using only **Vp3**, indicating that this subunit is

responsible for mediating **AAV** receptor attachment. Finally, class III mutants assembled virions, encapsidated DNA, and infected target cells. Infectivity of these mutants ranged from 5 to 100% of that of the wild-type, demonstrating for the first time the ability to alter capsid proteins without interfering with infectivity. These AAV virions with altered capsid subunits will provide critical templates for manipulating AAV vectors for cell-specific gene delivery in vivo. In summary, the AAV capsid variants described here will facilitate further study of virus assembly, entry, and infection, as well as advance the development of this versatile vector system.

L9 ANSWER 3 OF 3 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 77229536 MEDLINE
DOCUMENT NUMBER: 77229536 PubMed ID: 881618
TITLE: Complementation of adeno-associated satellite virus (AAV) by temperature-sensitive mutants of adenovirus type 31.
AUTHOR: Mayor H D; Carrier S; Jordan L
SOURCE: JOURNAL OF GENERAL VIROLOGY, (1977 Jun) 35 (3) 545-53. Journal code: 0077340. ISSN: 0022-1317.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197709
ENTRY DATE: Entered STN: 19900314
Last Updated on STN: 19900314
Entered Medline: 19770917

AB Temperature-sensitive (ts) matants of human adenovirus type 31 were able to complement adeno-associated satellite virus (AAV) antigen production in both HEK and KB cells at both permissive and non-permissive temperatures. However, mutant ts 94, an adenovirus 31 **mutant** which produces apparently normal amounts of **structural** protein and DNA but is defective in maturation, was significantly inhibited in its ability to potentiate **AAV** infectivity at the non-permissive temperature. Normal AAV DNA and adenovirus DNA were isolated from co-infections with AAV and mutant ts 94 at the non-permissive temperature. We suggest that an adenovirus-coded maturation function common to both adenovirus and AAV maturation is defective in the ts 94 system.

=> d his

(FILE 'HOME' ENTERED AT 14:44:36 ON 10 SEP 2003)

FILE 'MEDLINE, CAPLUS' ENTERED AT 14:45:10 ON 10 SEP 2003
L1 1 S AAV (S) (STRUCTURAL (A) PROTEIN OR VP1 OR VP2 OR VP3) AND (IN

FILE 'STNGUIDE' ENTERED AT 14:48:34 ON 10 SEP 2003

FILE 'MEDLINE, CAPLUS' ENTERED AT 14:50:01 ON 10 SEP 2003
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L3 1 S AAV AND (STRUCTURAL (A) PROTEIN OR VP1 OR VP2 OR VP3) AND (IN
L4 37 S AAV AND (STRUCTURAL (A) PROTEIN OR VP1 OR VP2 OR VP3) AND (IN
L5 22 S AAV (S) (STRUCTURAL (A) PROTEIN OR VP1 OR VP2 OR VP3) AND (IN
L6 4 S AAV (S) (STRUCTURAL (A) PROTEIN OR VP1 OR VP2 OR VP3) (S) (IN

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L7              3 DUP REM L6 (1 DUPLICATE REMOVED)
L8              5 S (MUTANT OR MUTATED OR MUTATE) (10A) (STRUCTURAL OR VP1 OR VP2
L9              3 DUP REM L8 (2 DUPLICATES REMOVED)

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 NEWS  4  Feb 24   TEMA now available on STN
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 NEWS  9  Mar 24   Additional information for trade-named substances without
                   structures available in REGISTRY
 NEWS 10  Apr 11   Display formats in DGENE enhanced
 NEWS 11  Apr 14   MEDLINE Reload
 NEWS 12  Apr 17   Polymer searching in REGISTRY enhanced
 NEWS 13  SEP 09   CA/CAplus records now contain indexing from 1907 to the
                   present
 NEWS 14  Apr 21   New current-awareness alert (SDI) frequency in
                   WPIDS/WPINDEX/WPIX
 NEWS 15  Apr 28   RDISCLOSURE now available on STN
 NEWS 16  May 05   Pharmacokinetic information and systematic chemical names
                   added to PHAR
 NEWS 17  May 15   MEDLINE file segment of TOXCENTER reloaded
 NEWS 18  May 15   Supporter information for ENCOMPPAT and ENCOMPLIT updated
 NEWS 19  May 19   Simultaneous left and right truncation added to WSCA
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                   right truncation
 NEWS 21  Jun 06   Simultaneous left and right truncation added to CBNB
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 NEWS 25  Jul 16   Data from 1960-1976 added to RDISCLOSURE
 NEWS 26  Jul 21   Identification of STN records implemented
 NEWS 27  Jul 21   Polymer class term count added to REGISTRY
 NEWS 28  Jul 22   INPADOC: Basic index (/BI) enhanced; Simultaneous Left and
                   Right Truncation available
 NEWS 29  AUG 05   New pricing for EUROPATFULL and PCTFULL effective
                   August 1, 2003
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NEWS 30   AUG 13  Field Availability (/FA) field enhanced in BEILSTEIN
NEWS 31   AUG 15  PATDPAFULL: one FREE connect hour, per account, in
                  September 2003
NEWS 32   AUG 15  PCTGEN: one FREE connect hour, per account, in
                  September 2003
NEWS 33   AUG 15  RDISCLOSURE: one FREE connect hour, per account, in
                  September 2003
NEWS 34   AUG 15  TEMA: one FREE connect hour, per account, in
                  September 2003
NEWS 35   AUG 18  Data available for download as a PDF in RDISCLOSURE
NEWS 36   AUG 18  Simultaneous left and right truncation added to PASCAL
NEWS 37   AUG 18  FROSTI and KOSMET enhanced with Simultaneous Left and Right
                  Truncation
NEWS 38   AUG 18  Simultaneous left and right truncation added to ANABSTR

NEWS EXPRESS  April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT
              MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
              AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003
NEWS HOURS    STN Operating Hours Plus Help Desk Availability
NEWS INTER    General Internet Information
NEWS LOGIN    Welcome Banner and News Items
NEWS PHONE    Direct Dial and Telecommunication Network Access to STN
NEWS WWW      CAS World Wide Web Site (general information)

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FILE 'HOME' ENTERED AT 13:58:24 ON 11 SEP 2003

=> s single (A) chain (A) antibody (S) CD34
THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE
Some commands only work in certain files.  For example, the EXPAND
command can only be used to look at the index in a file which has an
index.  Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of
commands which can be used in this file.

=> file medline caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.42       0.42

FILE 'MEDLINE' ENTERED AT 13:59:20 ON 11 SEP 2003

FILE 'CAPLUS' ENTERED AT 13:59:20 ON 11 SEP 2003
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=> s single (A) chain (A) antibody (S) CD34
L1          13 SINGLE (A) CHAIN (A) ANTIBODY (S) CD34

=> dup rem l1
PROCESSING COMPLETED FOR L1
L2           9 DUP REM L1 (4 DUPLICATES REMOVED)

=> d ibib abs 1-9

L2   ANSWER 1 OF 9     MEDLINE on STN                    DUPLICATE 1
ACCESSION NUMBER:   2001284813     MEDLINE
DOCUMENT NUMBER:    21142084   PubMed ID: 11209088
TITLE:              Anti-VEGFR-2 scFvs for cell isolation. Single-
                    chain antibodies recognizing the human
                    vascular endothelial growth factor receptor-2
                    (VEGFR-2/flk-1) on the surface of primary endothelial cells
                    and preselected CD34+ cells from cord blood.
AUTHOR:             Boldicke T; Tesar M; Griesel C; Rohde M; Grone H J;
                    Waltenberger J; Kollet O; Lapidot T; Yayon A; Weich H
CORPORATE SOURCE:   German Research Centre for Biotechnology, Department of
                    Applied Genetics, Braunschweig, Germany.. tbo@gbf.de
SOURCE:             STEM CELLS, (2001) 19 (1) 24-36.
                    Journal code: 9304532. ISSN: 1066-5099.
PUB. COUNTRY:       United States
DOCUMENT TYPE:      Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:           English
FILE SEGMENT:       Priority Journals
ENTRY MONTH:        200105
ENTRY DATE:         Entered STN: 20010529
                    Last Updated on STN: 20010529
                    Entered Medline: 20010524
AB   Five specific single-chain antibodies recognizing the human vascular
     endothelial growth factor receptor-2 (VEGFR-2/KDR) were selected from a
     V-gene phage display library constructed from mice immunized with the
     extracellular domain of VEGFR-2 (Ig-like domain 1-7). All five scFv
     antibodies (A2, A7, B11, G3, and H1) bound to the purified native antigen
     in enzyme-linked immunosorbent assay and Dot Blot, and showed no
     crossreactivity to the human VEGF-receptor 1 (VEGFR-1). The selected
     antibodies recognize a conformation-dependent epitope of the native
     receptor and do not recognize denatured antigen in Western blots, as well
     as linear overlapping peptides comprising the sequence of the human
     VEGFR-2. The five scFv antibodies bind to the surface of endothelial
     cells overexpressing human VEGFR-2 c-DNA (PAE/VEGFR-2 cells) as detected
     by surface immunofluorescence using confocal microscopy. In addition scFv
     A7 specifically detected VEGFR-2 expressing endothelial cells in the
     glomerulus of frozen human kidney tissue sections. Therefore, A7 has
     potential clinical application as a marker for angiogenesis in
     cryosections of different human tissues. Additionally, two recombinant
     scFvs (A2 and A7) very efficiently recognize VEGFR-2 on PAE/VEGFR-2 cells
     and freshly prepared human umbilical vein endothelial cells by
     fluorescence-activated cell sorter (FACS) analysis. The scFv fragment A7,
     which was the most sensitive antibody in FACS analysis, recognizes human
     CD34+VEGFR-2+ hematopoietic immature cells within the population of
     enriched CD34+ cells isolated from human cord blood. The dissociation
     constant of A7 was determined to be K(d) = 3.8 x 10(-9) M by BIAcore
     analysis. In conclusion, scFv fragment A7 seems to be an important tool
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for FACS analysis and cell sorting of vascular endothelial cells, progenitor cells and hematopoitic stem cells, which are positive for VEGFR-2 gene expression.

L2 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:692016 CAPLUS
DOCUMENT NUMBER: 132:22064
TITLE: Inhibition of human immunodeficiency virus replication and growth advantage of CD4+ T cells and monocytes derived from CD34+ cells transduced with an intracellular antibody directed against human immunodeficiency virus type 1 tat
AUTHOR(S): Poznansky, Mark C.; La Vecchio, Joyce; Silva-Arietta, Sandra; Porter-Brooks, Julie; Brody, Kate; Olszak, Ivona T.; Adams, Gregor B.; Ramstedt, Urban; Marasco, Wayne A.; Scadden, David T.
CORPORATE SOURCE: Partners AIDS Research Center and MGH Cancer Center, Harvard Medical School, Massachusetts General Hospital, Boston, MA, 02129, USA
SOURCE: Human Gene Therapy (1999), 10(15), 2505-2514
CODEN: HGTHE3; ISSN: 1043-0342
PUBLISHER: Mary Ann Liebert, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Current clin. gene therapy protocols for the treatment of human immunodeficiency virus type 1 (HIV-1) infection involve the ex vivo transduction and expansion of CD4+ T cells derived from HIV-pos. patients at a late stage in their disease (CD4+ cell count <400 cells/mm3). We examd. the efficiency of transduction and transgene expression in adult bone marrow (BM)- and umbilical cord blood (UCB)-derived CD34+ cells induced to differentiate into T cells and monocytes in vitro with an MuLV-based vector encoding the neomycin resistance gene and an intracellular antibody directed against the Tat protein of HIV-1 (sFvtat1-C.kappa.). The expression of the marker gene and the effects of antiviral construct on subsequent challenge with monocytotropic and T cell-tropic HIV-1 isolates were monitored in vitro in purified T cells and monocytes generated in culture from the transduced CD34+ cells. Transduction efficiencies of CD34+ cells ranged between 22 and 27%. Differentiation of CD34+ cells into T cells or monocytes was not significantly altered by the transduction process. HIV-1 replication in monocytes and CD4+ T cells derived from CD34+ cells transduced with the intracellular antibody gene was significantly reduced in comparison with the degree of HIV replication seen in monocytes and CD4+ T cells derived from CD34+ cells transduced with the neomycin resistance gene alone. Further, T cells and monocytes derived from CD34+ cells transduced with the intracellular antibody gene were demonstrated to express the sFvtat1-C.kappa. transgene by RT-PCR and had a selective growth advantage in cultures that had been challenged with HIV-1. These data demonstrate that sFvtat1-C.kappa. inhibits HIV-1 replication in T cells and monocytes developing from CD34+ cells and supports the continuing development of a stem cell gene therapy for the treatment of HIV-1 infection.
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 3 OF 9 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 1999191986 MEDLINE

DOCUMENT NUMBER: 99191986 PubMed ID: 10094198
TITLE: Targeting retroviral vectors to CD34-expressing cells: binding to CD34 does not catalyze virus-cell fusion.
AUTHOR: Benedict C A; Tun R Y; Rubinstein D B; Guillaume T; Cannon P M; Anderson W F
CORPORATE SOURCE: Gene Therapy Laboratories, Norris Cancer Center, University of Southern California School of Medicine, Los Angeles 90033, USA.
CONTRACT NUMBER: CA59318-04 (NCI)
SOURCE: HUMAN GENE THERAPY, (1999 Mar 1) 10 (4) 545-57.
Journal code: 9008950. ISSN: 1043-0342.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; AIDS
ENTRY MONTH: 199904
ENTRY DATE: Entered STN: 19990517
Last Updated on STN: 19990517
Entered Medline: 19990430

AB We have attempted to engineer murine leukemia virus (MuLV)-based retroviral vectors to specifically transduce cells expressing human CD34, an antigen present on the surface of undifferentiated hematopoietic stem cells. A number of chimeric ecotropic MuLV envelope (Env) proteins were constructed that contained anti-**CD34 single-chain antibody** variable fragments (scFvs). The scFv-Env proteins were generated either by replacing the receptor-binding domain of Env with the scFv or by inserting the scFv into the N terminus of the Env protein. Only chimeric Env proteins with scFv insertions between amino acids 6 and 7 were incorporated into viral particles, and coexpression of native MuLV Env did not rescue incorporation-defective proteins. In addition, the efficiency of incorporation varied with the specific anti-CD34 scFv that was used. Retroviral vectors containing the scFv-Env proteins bound to CD34+ cells and transduced NIH 3T3 cells expressing human CD34 (3T3-CD34 cells) at approximately twice the efficiency of the parental NIH 3T3 cells. However, the introduction of the mutation D84K, which prevents binding to the ecotropic MuLV receptor mcat-1, prevented transduction of both NIH 3T3 and 3T3-CD34 cells. Complementation cell-cell fusion assays [Zhao et al. (1997). J. Virol. 71, 6967-6972] in 3T3-CD34 cells revealed that although the scFv-Env proteins could contribute postbinding entry functions when bound to mcat-1, they were unable to do so when bound to CD34. Taken together, these data suggest that although the interaction with CD34 effectively increased the concentration of virus on 3T3-CD34 cells, entry could occur only through an interaction with mcat-1; CD34 alone was not capable of triggering the appropriate postbinding changes that lead to viral entry.

L2 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:262557 CAPLUS
DOCUMENT NUMBER: 131:98315
TITLE: Construction and sequence analysis of anti-**CD34 single-chain antibody**
AUTHOR(S): Hu, Baocheng; Pomerantz, Roger J.; Duan, Lingxun
CORPORATE SOURCE: Institute of Biotechnology, Academy of Military Medical Sciences, Beijing, 100071, Peop. Rep. China
SOURCE: Junshi Yixue Kexueyuan Yuankan (1999), 23(1), 1-4

CODEN: JYKYEL; ISSN: 1000-5501
PUBLISHER: Junshi Yixue Kexueyuan Yuankan Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB A hybridoma which can secrete anti-**CD34** monoclonal antibody was used in the construction of **single-chain antibody** (sFv) gene to clone anti-**CD34 single-chain antibody** gene. The cells were used for prepn. of total cellular RNA and the cDNAs of the variable heavy chain (VH) and light chain (VL) regions were synthesized by RT-PCR. The framework regions (FR) and complementary detg. regions (CDR) of the antibody were detd. by using the Kabat antibody sequence database and new PCR primers contg. appropriate restriction enzyme sites for further cloning were used to reamplify each of the VL and VH fragments, with deletion of the remaining secretory leader sequences. The DNAs of light and heavy chain were joined together via a flexible linker to obtained anti-CD34 sFv gene. The sequence anal. demonstrated that the VL and VH belonged to kappa light chain subgroup V and heavy chain subgroup I (B) of mouse variable region resp. The complete sFv construct, including linker sequence, was 813 bp and the mol. wt. of the encoded protein is approx. 30 kDa.

L2 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:388169 CAPLUS
DOCUMENT NUMBER: 129:94463
TITLE: Cloning of cDNA for VH and VL of mouse monoclonal antibody to human antigen CD34 and preparation of humanized antibodies for clinical use
INVENTOR(S): Miyamura, Koichi; Ono, Mitsuharu
PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan; Asahi Medical Co.
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10155489	A2	19980616	JP 1996-331647	19961127

PRIORITY APPLN. INFO.: JP 1996-331647 19961127
AB The cDNA encoding VH and VL of the monoclonal antibody, that recognizes human antigen CD34 and is secreted by mouse hybridoma anti-My-10, is isolated and used for the prepn. of humanized antibodies or ScFV (single-chain variable fragment). Use of the recombinant antibodies as a therapeutic agent for, e.g., leukemia, is claimed.

L2 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:759396 CAPLUS
DOCUMENT NUMBER: 130:104767
TITLE: Cell-type-specific gene transfer into human cells with retroviral vectors that display single-chain antibodies
AUTHOR(S): Jiang, An; Chu, Te-Hua T.; Nocken, F.; Cichutek, Klaus; Dornburg, Ralph
CORPORATE SOURCE: Div. Infectious Diseases, Thomas Jefferson Univ.,

Philadelphia, PA, 19107, USA
SOURCE: Journal of Virology (1998), 72(12), 10148-10156
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The successful application of human gene therapy protocols on a broad clin. basis will depend on the availability of in vivo cell-type-specific gene delivery systems. We have developed retroviral vector particles, derived from spleen necrosis virus (SNV), that display the antigen binding site of an antibody on the viral surface. Using retroviral vectors derived from SNV that displayed single-chain antibodies (scAs) directed against a carcinoembryonic antigen-cross-reacting cell surface protein, we have shown that an efficient, cell-type-specific gene delivery can be obtained. In this study, we tested whether other scAs displayed on SNV vector particles can also lead to cell-type-specific gene delivery. We displayed the following scAs on the retroviral surface: one directed against the human cell surface antigen Her2neu, which belongs to the epidermal growth factor receptor family; one directed against the stem cell-specific antigen CD34; and one directed against the transferrin receptor, which is expressed on liver cells and various other tissues. We show that retroviral vectors displaying these scAs are competent for infection in human cells which express the antigen recognized by the scA. Infectivity was cell type specific, and titers above 105 CFU per mL of tissue culture supernatant medium were obtained. The d. of the antigen on the target cell surface does not influence virus titers in vitro. Our data indicate that the SNV vector system is well suited for the development of a large variety of cell-type-specific targeting vectors.

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 7 OF 9 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 1998412462 MEDLINE
DOCUMENT NUMBER: 98412462 PubMed ID: 9741431
TITLE: Development of novel cell surface CD34-targeted recombinant adenoassociated virus vectors for gene therapy.
AUTHOR: Yang Q; Mamounas M; Yu G; Kennedy S; Leaker B; Merson J; Wong-Staal F; Yu M; Barber J R
CORPORATE SOURCE: Immusol, Inc., San Diego, CA 92121, USA.
SOURCE: HUMAN GENE THERAPY, (1998 Sep 1) 9 (13) 1929-37.
Journal code: 9008950. ISSN: 1043-0342.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199811
ENTRY DATE: Entered STN: 19990106
Last Updated on STN: 19990106
Entered Medline: 19981118

AB Recombinant adenoassociated virus (rAAV) type 2 vectors have been used to transduce a wide variety of cell types, including hematopoietic progenitor cells. For in vivo gene transfer, it is desirable to have an rAAV vector that specifically transduces selected target cells. As a first step toward generating an rAAV vector capable of targeting delivery in vivo, we have engineered a chimeric protein combining the AAV capsid protein and the variable region of a **single-chain antibody**

against human **CD34** molecules, a cell surface marker for hematopoietic stem/progenitor cells. Inclusion of the chimeric **CD34 single-chain antibody**-AAV capsid proteins within an rAAV virion significantly increased the preferential infectivity of rAAV for the **CD34**+ human myoleukemia cell line KG-1, which is normally refractory to rAAV transduction. Antibodies against the **single-chain antibody** and the **CD34** protein blocked this transduction. This chimeric vector represents a significant improvement in the host range of rAAV and the first step toward specific gene delivery by rAAV vectors to cells of choice, in this case, hematopoietic progenitor cells, for the treatment of human disease.

L2 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1997:454058 CAPLUS
DOCUMENT NUMBER: 127:80164
TITLE: Single-chain antibodies with membrane-binding domains that mediate adhesion between cells and their use as co-stimulatory ligands
INVENTOR(S): Ledbetter, Jeffrey A.; Hayden, Martha; Fell, Perry; Mittler, Robert; Winberg, Gosta
PATENT ASSIGNEE(S): Bristol-Myers Squibb Company, USA
SOURCE: PCT Int. Appl., 69 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9720048	A2	19970605	WO 1996-US19051	19961127

W: CA, JP, MX
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
PRIORITY APPLN. INFO.: US 1995-7755P P 19951130
AB Single-chain antibodies (sFv mols.) with membrane-binding domains are described. These sFv mols. stimulate adhesion between CD4+ T-cells and antigen-presenting cells thereby increasing the immune response against disease. The antigen binding domain binds a leukocyte antigen and transmembrane domain is derived from a cell surface receptor, specifically a leukocyte antigen. Retrovirus expression vectors for sFv's using monoclonal antibodies to neural cell adhesion mol. L1 with the transmembrane domain of B7 or CD58 were constructed by std. methods. Expression of the constructs in animal cell lines led to surface presentation of the antibody.

L2 ANSWER 9 OF 9 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 97203226 MEDLINE
DOCUMENT NUMBER: 97203226 PubMed ID: 9050944
TITLE: Determination of the binding affinity of an anti-**CD34 single-chain antibody** using a novel, flow cytometry based assay.
AUTHOR: Benedict C A; MacKrell A J; Anderson W F
CORPORATE SOURCE: Gene Therapy Laboratories, Norris Cancer Center, University of Southern California School of Medicine, Los Angeles 90033, USA.

SOURCE: JOURNAL OF IMMUNOLOGICAL METHODS, (1997 Feb 28) 201 (2) 223-31.
Journal code: 1305440. ISSN: 0022-1759.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199703
ENTRY DATE: Entered STN: 19970407
Last Updated on STN: 19970407
Entered Medline: 19970326

AB A **single chain antibody** (scFv) was constructed from a hybridoma expressing the anti-**CD34** monoclonal antibody My10. The scFv was expressed in the mouse fibroblast cell line NIH 3T3, and purified from culture supernatant via an epitope tag fused to the C-terminus of the protein. The scFv equilibrium dissociation constant (KD) was determined to be 2.4 X 10(-7) M using a fluorescence based flow cytometry assay involving recognition of the epitope tag, and bound approximately 24-fold less avidly to CD34 expressing KG-1a cells than the native antibody My10. This novel and previously unreported method for determining antibody binding affinity offers several advantages over alternative methods. It is rapid and simple, and unlike methods that directly label the antibody, it involves no covalent modifications of antibody variable domain residues that could potentially interfere with antigen binding. The KD for the anti-CD33 antibody HuG1 (Caron et al. (1992) The biological and immunological features of humanized M195 (anti-CD33) monoclonal antibodies. Cancer Res. 52, 6761-6767) was determined as well. The close agreement of this value and the previously reported value, determined by a radioligand competition method, validates the use of this assay for antibody affinity determination. We discuss various potential applications for this anti-CD34 scFv.

```
=> s YKQIS
L3            0 YKQIS

=> s sqsga
L4            0 SQSGA

=> s yltln
L5            0 YLTLN

=> s ngsqa
L6            0 NGSQA

=> s yylsr
L7            0 YYLSR

=> s tntps
L8            0 TNTPS

=> s eekff
L9            0 EEKFF

=> spqsgv
SPQSGV IS NOT A RECOGNIZED COMMAND
```

The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s pqsgv
L10 0 PQSGV

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:ssspta1636mxm

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS 3	Feb 24	PCTGEN now available on STN
NEWS 4	Feb 24	TEMA now available on STN
NEWS 5	Feb 26	NTIS now allows simultaneous left and right truncation
NEWS 6	Feb 26	PCTFULL now contains images
NEWS 7	Mar 04	SDI PACKAGE for monthly delivery of multifile SDI results
NEWS 8	Mar 24	PATDPAFULL now available on STN
NEWS 9	Mar 24	Additional information for trade-named substances without structures available in REGISTRY
NEWS 10	Apr 11	Display formats in DGENE enhanced
NEWS 11	Apr 14	MEDLINE Reload
NEWS 12	Apr 17	Polymer searching in REGISTRY enhanced
NEWS 13	SEP 09	CA/CAplus records now contain indexing from 1907 to the present
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NEWS 18	May 15	Supporter information for ENCOMPPAT and ENCOMPLIT updated
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NEWS 27	Jul 21	Polymer class term count added to REGISTRY
NEWS 28	Jul 22	INPADOC: Basic index (/BI) enhanced; Simultaneous Left and

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 NEWS 32  AUG 15  PCTGEN: one FREE connect hour, per account, in
                  September 2003
 NEWS 33  AUG 15  RDISCLOSURE: one FREE connect hour, per account, in
                  September 2003
 NEWS 34  AUG 15  TEMA: one FREE connect hour, per account, in
                  September 2003
 NEWS 35  AUG 18  Data available for download as a PDF in RDISCLOSURE
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 NEWS 37  AUG 18  FROSTI and KOSMET enhanced with Simultaneous Left and Right
                  Truncation
 NEWS 38  AUG 18  Simultaneous left and right truncation added to ANABSTR

 NEWS EXPRESS  April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT
               MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
               AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003
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 NEWS INTER    General Internet Information
 NEWS LOGIN    Welcome Banner and News Items
 NEWS PHONE    Direct Dial and Telecommunication Network Access to STN
 NEWS WWW      CAS World Wide Web Site (general information)

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FILE 'HOME' ENTERED AT 15:41:12 ON 11 SEP 2003

=> file medline caplus
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                                 0.42       0.42

FILE 'MEDLINE' ENTERED AT 15:42:07 ON 11 SEP 2003

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=> s AAV and (targeting or tropism)
L1          219 AAV AND (TARGETING OR TROPISM)

=> dup rem l1
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PROCESSING COMPLETED FOR L1
L2 143 DUP REM L1 (76 DUPLICATES REMOVED)

=> s l2 and py<=1998
L3 40 L2 AND PY<=1998

=> s l3 and (VP1 or VP2 or VP3)
L4 1 L3 AND (VP1 OR VP2 OR VP3)

=> d ibib abs

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:169418 CAPLUS
DOCUMENT NUMBER: 128:227084
TITLE: Methods and compositions for liver-specific delivery of therapeutic molecules using recombinant adeno-associated virus vectors
INVENTOR(S): Srivastava, Aron; Ponnazhagan, Selvarangan; Chloemer, Robert H.; Wang, Xu-Shan; Yoder, Mervin C.; Zhou, Shang-Zhen; Escobedo, Jaime; Dwarki, Varavani
PATENT ASSIGNEE(S): Chiron Corporation, USA; Indiana University
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CODEN: PIXXD2
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PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
WO 9809524	A1	19980312	WO 1997-US15453	19970902	<--
W: CA, JP					
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE					
EP 933997	A1	19990811	EP 1997-940762	19970902	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
JP 2001500376	T2	20010116	JP 1998-512823	19970902	
US 6521225	B1	20030218	US 1997-921497	19970902	
US 2001051611	A1	20011213	US 2001-912680	20010724	
US 2003166284	A1	20030904	US 2002-109799	20020328	

PRIORITY APPLN. INFO.:
US 1996-25616P P 19960906
US 1996-25649P P 19960911
US 1997-921497 A1 19970902
WO 1997-US15453 W 19970902

AB Provided are methods for selectively expressing therapeutic mols., such as secretory proteins, antisense mols. and ribozymes, in the liver. The methods find use in treating hepatic diseases or conditions. The methods also find use in treating any disease or condition in which systemic administration of the therapeutic substance, for example, a secretory protein, is desired. The methods involve administering to a mammalian patient having a need for liver expression of a therapeutic mol. an **AAV** vector contg. a therapeutically effective amt. of the therapeutic mol. Also provided are novel vectors employable in these methods. Expts. revealed that, following i.v. injection of **AAV** vectors into mice, the **AAV** genomes were found predominantly in the liver. The heterologous genes carried by these vectors (chimeric

cytomegalovirus promoter-lacZ or .beta.-globin promoter-globin genes) were expressed in the liver. Cotransfection of adenovirus 2-infected 293 cells with the **AAV** vectors and helper plasmid contg. cap and rep genes resulted in prodn. of 0.1-10% wild-type **AAV**. Replacement of the last 10 nucleotides of the ITR D sequence with unrelated nucleotides reduced this illegitimate recombination was reduced. Four recombinant **AAV** vectors (pD-5, pD-10, pD-15 and pD-20) with such modified ITR regions were prepd.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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PI WO 9809524 A1 **19980312**

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ST adeno assocd virus vector liver **tropism**; therapeutic gene expression liver **AAV** vector

IT Proteins, specific or class
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**VP1**, fusion protein with hepatitis B surface antigen, **AAV** helper virus encoding; methods and compns. for liver-specific delivery of therapeutic mols. using recombinant adeno-assocd. virus vectors)

IT Antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(hepatitis B surface, fusion protein with **AAV** VP-1 protein, **AAV** helper virus encoding; methods and compns. for liver-specific delivery of therapeutic mols. using recombinant

adeno-assocd. virus vectors)

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L1          219 S AAV AND (TARGETING OR TROPISM)
L2          143 DUP REM L1 (76 DUPLICATES REMOVED)
L3           40 S L2 AND PY<=1998
L4            1 S L3 AND (VP1 OR VP2 OR VP3)
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